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Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels

Report of the Secretary-General

Executive summary

This report has been prepared in response to the request by the Economic and Social Council, in its resolution 2006/46, for the United Nations Secretary-General to inform the Commission on Science and Technology for Development (CSTD) concerning the implementation of outcomes of the World Summit on the Information Society (WSIS). It reviews progress at the international and regional levels, and identifies obstacles and constraints encountered. It has been prepared by the United Nations Conference on Trade and Development (UNCTAD) secretariat based on information provided by entities in the United Nations system and elsewhere on their efforts during 2014 to implement WSIS outcomes, with a view to sharing effective practices and lessons learned.

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Introduction

1. This report has been prepared in response to Economic and Social Council resolution 2006/46. It includes information provided by 27 United Nations and other international organizations and stakeholders,[1] responding to a letter from the Secretary-General of UNCTAD which invited contributions concerning trends, achievements and obstacles in the implementation of WSIS outcomes. It focuses on major initiatives undertaken during 2014.

I. Key trends

A. Digital opportunity and digital divide

2. There has been continued growth in adoption and use of information and communications technologies (ICTs) in both developed and developing countries. Data published by the Partnership on Measuring ICTs for Development, in its *Final WSIS Targets Review*, show that over 90 per cent of the world's population is now covered by mobile networks. The number of mobile subscriptions is almost equal to the world's population. Almost 50 per cent of the world's people are estimated to be subscribers, while some 44 per cent of households are estimated to have Internet access and some 39 per cent of people, to be Internet users. The WSIS target that half the world's population should have access to ICTs within their reach and make use of them should be achieved, the Partnership suggests, by the end of 2016.[2]

3. However, data published by the Partnership also show continued digital divides between developed and developing countries. While 78 per cent of households in developed countries have Internet access, only 5 per cent in the least developed countries do so. Fixed and mobile broadband connections are much more widely available, and more affordable, in developed than developing countries. Rural areas in many countries still have little broadband access. As a result, there is a risk that digital divides will grow and developing countries, particularly the least developed countries, will fail to derive full benefits from the information society.[3]

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[1] Council of Europe, Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific (ESCAP), Economic and Social Commission for Western Asia (ESCWA), Food and Agriculture Organization of the United Nations (FAO), Internet Corporation for Assigned Names and Numbers (ICANN), Internet Governance Forum (IGF), International Trade Centre, International Telecommunication Union (ITU), Organization for Economic Cooperation and Development (OECD), UNCTAD, United Nations Department of Economic and Social Affairs, Economic Commission for Europe (ECE), United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Industrial Development Organization, the World Bank, World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization, World Trade Organization, Association for Progressive Communications, Deutsche Telekom, End Child Prostitution, Child Pornography and the Trafficking of Children for Sexual Purposes, Internet Society, Telefónica and Verizon. For these contributions, see www.unctad.org/cstd.

[2] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/wsisreview2014/WSIS2014_review.pdf and http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf.

[3] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf.

B. The evolving Internet

4. Rapid change continues to take place in technology, services and governance on the Internet. Social networks and interactive web services have extended their reach into society, enabling users to publish views and access wider content. Internet traffic is increasingly dominated by video content and by the movement of data and applications from users' hardware to the cloud. There has been increased debate concerning online privacy and surveillance.

5. ICANN invited applications for new global top-level domains in 2012, receiving 1,932 applications by June 2014, of which 116 were for internationalized domain names. By December 2014, 469 new global top-level domains had been introduced. ICANN has established a Stewardship Transition Coordinating Group under the Internet Assigned Numbers Authority (IANA) to develop proposals concerning administration of the IANA function, following announcement by the National Telecommunications and Information Administration of the United States of America that it intends this to be transferred to the global multi-stakeholder community.[4]

6. Discussions concerning the future of Internet governance have taken place in United Nations and other forums, including the Internet Governance Forum and the ITU Plenipotentiary Conference. The General Assembly noted the hosting of the Global Multi-stakeholder Meeting on the Future of Internet Governance, known as NETmundial, by the Government of Brazil in April 2014.[5] UNESCO launched a comprehensive study of Internet-related issues, the outcomes of which will be reported to its General Conference in 2015.[6] The World Bank is preparing its 2016 *World Development Report* on Internet for development.[7]

C. Rapid developments in technology, services and applications

7. The rapid pace of change in ICT leads to the continuous introduction of new services and new opportunities for development applications. It has been estimated that the capabilities of ICT networks and services are now 30 times greater than at the time of WSIS, and that they will continue to grow as rapidly.[8]

8. Four developments, in particular, are impacting substantially on Governments, businesses and consumers. The introduction of smartphones and tablets has shifted individual and organizational computing towards more flexible mobile devices. Individuals, businesses and Governments are moving data and applications towards the cloud and cloud-based services. The datafication of government and business activity and the resources of cloud-based data management are enabling more extensive use of big data analysis and open data. The emerging "Internet of things", connecting devices as well as people to the Internet, will greatly expand the data available to enhance development opportunities.[9]

9. These developments also pose substantial challenges. Increased data traffic puts pressure on radio spectrum and increases the need for transition to what the ITU calls new

[4] https://www.icann.org/stewardship/coordination-group.
[5] A/RES/69/204; see also http://netmundial.br/.
[6] http://www.unesco.org/new/en/internetstudy.
[7] http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTWDRS/EXTNWDR2013/0,,contentMDK:23615285~pagePK:8258258~piPK:8258412~theSitePK:8258025,00.html.
[8] http://unctad.org/meetings/en/SessionalDocuments/ecn162014d3_en.pdf.
[9] http://unctad.org/meetings/en/SessionalDocuments/ecn162014d3_en.pdf.

regulations paradigms – a "fourth-generation regulation" – that respond to the recent dynamic changes in ICTs and markets.[10] Changes are required in national legislation and international commerce to accommodate electronic transactions and prepare for further innovations, while datafication and cloud computing raise concerns over data protection, privacy and data sovereignty.

D. The information society and the post-2015 development agenda

10. As well as reviewing implementation of WSIS outcomes, the General Assembly will in 2015 review the Millennium Development Goals, establish new sustainable development goals and agree the post-2015 development agenda which will guide international development policy and practice until 2030. Preparations for the sustainable development goals and post-2015 development agenda have been under way for the past two years.

11. The evolving information society will have a growing impact on social and economic development during implementation of the post-2015 agenda. The importance of exploiting the potential developmental value of ICTs and of considering the development of the inclusive information society in the broader context of the post-2015 development agenda was emphasized in the outcome documents of the WSIS+10 High-Level Event. In its resolution 69/204 of 19 December 2014, the General Assembly stressed the need to harness ICTs' potential as critical enablers of sustainable development and to consider capacity-building for their productive use in elaborating the post-2015 agenda.

II. The ten-year review of implementation of WSIS outcomes

12. The Tunis Agenda for the Information Society requested the General Assembly to make an overall review of the implementation of WSIS outcomes in 2015.[11] On 31 July 2014, the General Assembly adopted resolution 68/302 concerning modalities for this review.[12] It recognized the role of CSTD in assisting the Economic and Social Council as the focal point in system-wide WSIS follow-up, particularly the review and assessment of progress made in implementing WSIS outcomes. CSTD was requested to submit its report on the 10-year review following its eighteenth session, through the Council, to the General Assembly, by June 2015.

13. The General Assembly decided that its overall review will be concluded by a two-day high-level meeting, to be held in December 2015. This will take stock of progress made in the implementation of WSIS outcomes. It will address potential ICT gaps and areas for continued focus, as well as challenges, including bridging the digital divide and harnessing ICTs for development. It will be preceded by an intergovernmental preparatory process that takes into account inputs from all relevant WSIS stakeholders. The General Assembly requested its President to appoint two co-facilitators to lead an intergovernmental negotiation process resulting in an agreed outcome document for adoption at the high-level meeting, and to organize informal interactive consultations with all relevant stakeholders to collect inputs for this process.

14. ITU hosted the WSIS+10 High-Level Event, an extended version of the annual WSIS Forum, in Geneva during June 2014. The High-Level Event was co-organized by ITU, with UNESCO, UNCTAD and the United Nations Development Programme. It adopted two WSIS+10 outcome documents prepared through the Multi-stakeholder Participatory Platform: the *WSIS+10 Statement on Implementation of WSIS Outcomes*,

[10] http://www.itu.int/dms_pub/itu-d/opb/reg/D-REG-TTR.15-2014-PDF-E.pdf.
[11] http://www.itu.int/wsis/docs2/tunis/off/6rev1.html, paragraph 111.
[12] http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/68/302.

which assesses implementation to date, and the *WSIS+10 Vision for WSIS Beyond 2015*, which considers future implementation. The ITU Plenipotentiary Conference, held in the Republic of Korea in October/November 2014, endorsed the outcome documents.

15. In its resolution 2013/9 of 22 July 2013, the Economic and Social Council invited the CSTD to collect inputs from all facilitators and stakeholders, organize a substantive discussion concerning WSIS implementation at its seventeenth session, and submit the results of its 10-year review of progress made, through the Council, to the General Assembly as it will make its overall review of the implementation of the outcomes of the Summit in 2015. Following a substantive discussion at its seventeenth session in May 2014, the CSTD launched an open consultation including regional meetings and written contributions. A 10-year review report prepared by the CSTD secretariat will be considered by the Commission at its eighteenth session in May 2015.[13]

III. Implementation and follow-up at the regional level

A. Africa

16. The Economic Commission for Africa (ECA) reports that African countries have made gradual but encouraging progress in access to ICTs and their application in development. Investment in broadband infrastructure has increased, improving connectivity and facilitating development initiatives including mobile financial services. However, broadband deployment has not kept pace with other world regions, causing concern that Africa may miss economic opportunities that depend on high-quality communications.

17. ECA has supported the development of national ICT strategies through its African Information Society Initiative. Forty-eight African countries now have national ICT policies in place.[14] ECA published the *Manual for Measuring e-Government* with the Partnership on Measuring ICT for Development during 2014.[15] A regional consultation meeting, entitled "WSIS+10 and Beyond: Outcomes and Perspectives for Africa", is to take place in Ethiopia in April 2015.[16]

18. In June 2014, member States of the African Union agreed its Convention on Cyber Security and Personal Data Protection.[17] Governments and international agencies have focused on capacity-building in cybersecurity and legislation to facilitate e-commerce. The African Union Commission has contracted the Internet Society to support implementation of Internet exchange points in 30 countries and five regions of the continent.[18]

19. The third African Internet Governance Forum was held in Nigeria in July 2014, with support from ECA and the African Union.[19]

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[13] A draft report was considered by CSTD at its intersessional panel in November 2014: http://unctad.org/meetings/en/SessionalDocuments/CSTD_2014_wsis10review_report_en.pdf.

[14] http://unctad.org/en/PublicationsLibrary/a69d65_bn_ECA.pdf.

[15] http://www.itu.int/en/ITU-D/Statistics/Documents/partnership/eGovernment_Manual_Final_2014.pdf.

[16] http://www.uneca.org/wsis10.

[17] http://pages.au.int/sites/default/files/en_AU%20Convention%20on%20CyberSecurity%20Pers%20Data%20Protec%20AUCyC%20adopted%20Malabo.pdf.

[18] http://pages.au.int/axis.

[19] http://www.uneca.org/afigf.

B. Asia and the Pacific

20. ESCAP undertook a comprehensive review of WSIS outcomes during 2013. Almost all countries in the region have now achieved full mobile coverage but there is an increasing gap in mobile broadband deployment and Internet connectivity and use between more and less developed countries. Particular challenges arise for landlocked countries and small island developing States. ESCAP is developing improved indicators to measure and stimulate ICT development in the region, focusing on the impact of changing technologies.[20]

21. ESCAP works with regional agencies, including the Asian Development Bank and Asia–Pacific Telecommunity, to stimulate regional infrastructure development. Its Committee on Information and Communications Technology, meeting in Thailand in October 2014,[21] reinforced its commitment to promote the Asia–Pacific Information Superhighway, aimed at enhancing connectivity of landlocked developing countries through links to submarine cable and deployment of Internet exchange points.[22]

22. The Asian and Pacific Training Centre for Information and Communication Technology for Development provides training, research and knowledge management through its Academy of ICT Essentials for Government Leaders programme.[23]

C. Western Asia

23. ESCWA maintains an information society portal for the ESCWA region which gathers and analyses data on regional trends in order to provide information and resources to policymakers and other stakeholders.[24] Information from the portal was published in the latest edition of the ESCWA biennial *Regional Profile of the Information Society in the Arab Region*.[25]

24. ESCWA built on its 2013 review of e-government strategies by preparing a study of integration of e-government service delivery within the region. It prepared a study concerning cybercrime and cybersecurity, organized capacity-building initiatives to promote Internet exchange points and is finalizing a study of mobile government applications.[26]

25. ESCWA has continued to promote Arabic content and online services following the introduction of multilingual Internet domain names. A joint publication with ITU, *Digital Arabic Content*, was published in June 2014,[27] and a forum on digital Arabic content was organized in Egypt, in partnership with ITU and the League of Arab States, in November 2014.[28]

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[20] http://www.unescap.org/resources/working-paper-progress-towards-wsis-targets-escap-and-regional-perspectives-measuring-ict.

[21] http://www.unescap.org/events/committee-information-and-communications-technology-fourth-session.

[22] http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway.

[23] http://www.unapcict.org/academy.

[24] http://isper.escwa.un.org/.

[25] http://isper.escwa.un.org/ISProfiles/RegionalProfiles/RegionalProfile2013/RegionalProfile2013Launch/tabid/283/language/en-US/Default.aspx.

[26] http://unctad.org/meetings/en/Presentation/CSTD_2014_Fraihat.pdf.

[27] http://isper.escwa.un.org/FocusAreas/DigitalArabicContent/News/BoostingDigitalArabicContent/tabid/284/language/en-US/Default.aspx.

[28] http://isper.escwa.un.org/FocusAreas/DigitalArabicContent/News/SecondRegionalForumonDigitalArabicContent/tabid/285/language/en-US/Default.aspx.

26. The third Arab Internet Governance Forum was held in Lebanon in November 2014 under the title "Arab Perspective for Shaping the Future of the Internet".[29]

D. Latin America and the Caribbean

27. Studies by ECLAC show continued growth in ICT access and usage, but differing rates of digital development between countries. ECLAC is concerned that adoption of cloud computing lags behind OECD countries because of limited broadband capacity, weak legal and regulatory frameworks and lack of human resources, reducing potential benefits for economic growth. It has published a regional survey and policy proposals to stimulate take-up of cloud computing[30] and encourages adoption of big data and open data.[31]

28. ECLAC provides the technical secretariat for the 2010–2015 Plan of Action for the Information and Knowledge Society in Latin America and the Caribbean (eLAC2015), the region's third WSIS action plan, focused on broadband.[32] Member States discussed objectives for the digital agenda eLAC2018 at the Fifth Ministerial Conference on the Information Society in Latin America and the Caribbean in Costa Rica in November 2014. Proposals will be presented at the Sixth Ministerial Conference in Mexico in August 2015.

29. The ECLAC Observatory for the Information Society in Latin America and the Caribbean[33] gathers evidence from household surveys to enable analysis and support planning, while its Regional Broadband Observatory[34] monitors indicators on broadband diffusion, access, tariffs and speeds. ECLAC acts as the secretariat of the Regional Dialogue on broadband, which fosters regional infrastructure integration, regulatory consistency and the development of indicators.

E. Europe

30. ECE plays a central role in ICT-enabled trade facilitation. The United Nations Centre for Trade Facilitation and Electronic Business, which it manages, supports joint development of electronic business standards by public and private sectors.[35] ECE promotes "single window" data-sharing initiatives to reduce trade costs. Its online Trade Facilitation Implementation Guide provides a single point of access to trade information in four languages.[36]

31. The Council of Europe continued to implement its Strategy on Internet Governance for 2012–2015[37] and began preparing a successor strategy for 2016–2019. It adopted a guide to human rights for Internet users in April 2014, including freedoms of expression

[29] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=3361E.

[30] http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/7/52947/P52947.xml&xsl=/publicaciones/ficha-i.xsl&base=/publicaciones/top_publicaciones-i.xsl.

[31] http://www.cepal.org/en/publications/big-data-and-open-data-sustainability-tools-working-paper-prepared-economic-commission.

[32] http://www.cepal.org/socinfo/noticias/documentosdetrabajo/5/41775/2010-820-eLAC-Plan_of_Action.pdf.

[33] http://www.cepal.org/cgi-bin/getprod.asp?xml=/socinfo/noticias/paginas/8/44988/P44988.xml&xsl=/socinfo/tpl-i/p18f-st.xsl&base=/socinfo/tpl-i/top-bottom.xsl.

[34] http://www.cepal.org/socinfo/orba/.

[35] http://www.unece.org/cefact/.

[36] http://tfig.unece.org/.

[37] http://www.coe.int/t/dghl/cooperation/economiccrime/cybercrime/Documents/Internet%20Governance%20Strategy/Internet%20Governance%20Strategy%202012%20-%202015.pdf.

and association, privacy and children's rights.[38] It undertook capacity-building concerned with cybercrime, data protection and Internet governance, and supported the annual European Dialogue on Internet Governance, held in Germany in June 2014.[39] A multi-stakeholder platform, held in Azerbaijan in July 2014, explored the digitalization of culture.[40]

IV. Implementation and follow-up at the international level

A. General Assembly

32. On 19 December 2014, the General Assembly adopted resolution 69/204 on ICTs for development. This welcomed positive trends in connectivity and affordability, including increasing Internet access, rapid diffusion of mobile communications and development of new services and applications, but expressed concern about the growing gap in broadband provision between developing and developed countries, the gender gap in access to ICTs and challenges posed for investment by adverse economic conditions.

33. On 31 July 2014, the General Assembly adopted resolution 68/302 which set out modalities for its review of the implementation of WSIS outcomes.

B. Economic and Social Council

34. On 27 August 2014, the Economic and Social Council adopted resolution 2014/27, assessing progress in implementation and follow-up to WSIS outcomes.[41] It noted continuing progress in ICT access and development applications but reiterated concern about inequalities in their availability and quality. It noted the emergence of new technologies and services since WSIS, and changes in business models arising from the transition to a mobile-led communications environment. It urged United Nations agencies to incorporate WSIS recommendations in United Nations Development Assistance Frameworks.

35. The Council noted the outcomes of the first WSIS+10 event, entitled "Towards knowledge societies for peace and sustainable development", hosted by UNESCO in 2013, and of the WSIS+10 High-Level Event held in June 2014. It requested CSTD to report on its 10-year review of progress made in the implementation of WSIS outcomes, through it, to the General Assembly in 2015.

C. United Nations Group on the Information Society

36. The United Nations Group on the Information Society was established in 2006 by the United Nations Chief Executives Board as an inter-agency mechanism to coordinate the implementation of WSIS outcomes in the United Nations system. It held its eleventh meeting, chaired by ITU, in Geneva in June 2014.[42] In its workplan for 2014–2015, it

[38] http://www.coe.int/en/web/internet-users-rights/guide.

[39] http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCMQFjAA&url=http%3A%2F%2Fwww.eurodig.org%2F&ei=3-24VNqrO8T9Ua_2gKgN&usg=AFQjCNGujqLusfm2Uf41q0lkNg4LV3nqdw&sig2=Fd6tzDamo1x0dRHjeuQC1A&bvm=bv.83829542,d.d24.

[40] http://www.coe.int/t/dg4/cultureheritage/culture/digitisation/baku_en.asp.

[41] http://unctad.org/Sections/un_cstd/docs/ecosoc_res_WSIS2014_27_en.pdf.

[42] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=191.

decided to focus its activities on coordinating advocacy for ICTs in the post-2015 development agenda, including as follow-up to the WSIS+10 High-Level Event outcome documents and the Group's Joint Statement on the Post-2015 Development Process.

D. Facilitation and coordination of multi-stakeholder implementation

37. The General Assembly will review the implementation of WSIS outcomes at its session in 2015.

38. The WSIS Forum provides opportunities for stakeholders to network, learn and participate in discussions and consultations on WSIS implementation. The 2014 Forum was incorporated into the WSIS+10 High-Level Event. It featured high-level dialogues on monitoring the information society, WSIS+10 and the post-2015 development agenda, building trust in cyberspace and inclusive knowledge societies, together with some 150 other sessions, including action-line facilitation meetings. Forty ministers attended a round table that considered "WSIS+10 for Development beyond 2015".[43]

39. The ITU maintains the WSIS stocktaking platform, including the Stocktaking Database which includes entries for more than 6,000 activities.[44] WSIS Project Prizes are awarded annually at the WSIS Forum to recognize projects and initiatives that further WSIS goals.[45]

40. The WSIS Knowledge Communities portal is managed by UNESCO to facilitate information-sharing and dialogue among stakeholders.[46]

E. Civil society, business and multi-stakeholder partnerships

41. Many activities that support WSIS objectives are implemented by the private sector, civil society organizations, academic and technical bodies and multi-stakeholder partnerships.

42 Business Action to Support the Information Society, an initiative of the International Chamber of Commerce, works with businesses to support WSIS outcomes, including the WSIS Forum and the IGF.[47] The Alliance for Affordable Internet is a coalition of 60 public, private and non-profit organizations which focuses on broadband affordability, policy and regulation.[48]

43. The Association for Progressive Communications is one of many civil society organizations which work on ICT, development and rights issues and on Internet governance.[49] Its *Global Information Society Watch 2014* report, published with the Humanist Institute for Cooperation with Developing Countries, focused on communications surveillance in the digital age.[50] It has developed training materials for stakeholders concerned with the impact of ICTs on human rights, and works with the African Union Commission/New Partnership for Africa's Development to deliver Internet governance training.

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[43] Forum outcomes are in http://www.itu.int/wsis/implementation/2014/forum/inc/doc/outcome/OutcomeDocument2014.pdf.

[44] http://groups.itu.int/stocktaking/HOME.aspx.

[45] http://groups.itu.int/stocktaking/WSISProjectPrizes2014.aspx.

[46] http://www.wsis-community.org/

[47] http://www.iccwbo.org/advocacy-codes-and-rules/basis/.

[48] http://a4ai.org/.

[49] http://www.apc.org/.

[50] http://giswatch.org/2014-communications-surveillance-digital-age.

44. The Internet Society is a global clearing house for information and capacity-building about the Internet.[51] Its *Global Internet Report 2014* summarized recent developments, focusing on open and sustainable access for all.[52] It signed an agreement in November 2014 to collaborate with ITU on long-term approaches to spam in developing countries.[53]

F. Facilitation of action lines and selected implementation of activities of United Nations entities

1. Implementation of action lines

(a) The role of public governance authorities and all stakeholders in the promotion of ICTs for development (C1)

45. The contribution of ICTs to development features in the work of United Nations specialized agencies, multilateral organizations, international financial institutions and other stakeholders. Governments design and implement national strategies for ICTs in development, with the support of United Nations regional commissions, development partners and international financial institutions. Multilateral agencies play key roles in policy development and coordination, infrastructure deployment, standards design and financing ICT for development, at global, regional and national levels. Public–private and multi-stakeholder partnerships build on synergies between these activities and those of the private sector and civil society.

46. The 2014 action line meeting, facilitated by the United Nations Department of Economic and Social Affairs, focused on the outcome documents of the WSIS+10 High-Level Event, which encourage multi-stakeholder engagement and cooperation, including regional dialogue and collaboration, in areas such as affordable access, narrowing digital inequalities, and monitoring and evaluation.

(b) Information and communication infrastructure (C2)

47. ITU addresses infrastructure development, deployment and regulation through regional conferences, programmes, meetings and publications. It works with Governments and the private sector to establish international standards and regulations concerning telecommunications and radio spectrum. The growing volume of data traffic resulting from higher bandwidth and cloud computing has increased the importance attached by Governments, businesses and other stakeholders to spectrum management and the deployment of Internet Protocol version 6.[54]

48. Broadband infrastructure has become a core objective of ICT strategies for development. The theme of the ITU World Telecommunication Development Conference, held in Dubai in April 2014, was broadband for sustainable development.[55]

49. ITU and UNESCO coordinate the Broadband Commission for Digital Development, which brings together senior representatives of international organizations, Governments and the private sector to promote policies for adoption and use of broadband services. The Broadband Commission's report, *State of Broadband 2014: Broadband for All*,

[51] http://www.internetsociety.org/.
[52] http://www.internetsociety.org/sites/default/files/Global_Internet_Report_2014_0.pdf.
[53] http://www.itu.int/en/ITU-D/Cybersecurity/Pages/SPAM.aspx.
[54] http://www.itu.int/itu-wsis/docs/2014_ITU_Contribution_to-WSIS-Implementation.pdf, pp.4-14.
[55] http://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC14/Pages/default.aspx.

summarized trends and made recommendations for maximizing broadband investment and impact.[56]

(c) Access to information and knowledge (C3)

50. The Partnership on Measuring ICT for Development assessed progress concerning access to infrastructure and services in its *WSIS Final Targets Review*. The ITU Plenipotentiary Conference set out new targets for access in its Connect 2020 Agenda (see below).[57]

51. Meaningful access to information and knowledge requires improved human capabilities and available content as well as infrastructure. The focus of the 2014 action line meeting was on redefining access for the post-2015 development agenda, including open approaches to technology and content.[58] UNESCO has prioritized efforts to build media and information literacy.[59]

52. Access to scientific research and information is a priority within this action line. UNESCO has adopted an open access strategy,[60] including policy guidelines,[61] a Global Open Access Portal[62] and a Directory of Open Access Resources.[63] WHO, FAO, UNEP and WIPO collaborate in the Research4Life programme, which offers access to peer-reviewed journals for developing countries at little or no cost.[64] WIPO Lex provides free access to intellectual property laws and treaties.[65] Some 40,000 people benefited during 2014 from courses provided by the WIPO Academy.[66]

53. An international conference concerned with ICT accessibility for persons with disabilities was co-organized by UNESCO and the Government of India in November 2014.[67]

(d) Capacity-building (C4)

54. Education and capacity-building are crucial to enabling developing countries to derive social and economic gains from technological innovation. The annual facilitation meeting for WSIS action lines C4 and C7 (e-learning) focused on this objective through the theme "Digital competences towards an inclusive information society."[68]

55. Many United Nations agencies implemented conferences, workshops and training initiatives aimed at increasing the capacity of policymakers, officials and those working within the ICT sector concerned with technical and organizational aspects of the information society. The ITU Academy provides access to ICT training opportunities, delivered face-to-face or through distance learning. A new strategy and guidelines were

[56] http://www.broadbandcommission.org/Documents/reports/bb-annualreport2014.pdf.

[57] http://www.itu.int/en/plenipotentiary/2014/Documents/final-acts/pp14-final-acts-en.pdf, resolution WG-PL/9.

[58] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=208.

[59] http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/mil-as-composite-concept/.

[60] http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/images/GOAP/OAF2011/2.1_Mishra.pdf.

[61] http://unesdoc.unesco.org/images/0021/002158/215863e.pdf.

[62] http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/.

[63] http://road.issn.org/.

[64] http://www.research4life.org.

[65] http://www.wipo.int/wipolex/en/about.html.

[66] http://www.wipo.int/academy/en/.

[67] http://en.unesco.org/events/international-conference-%E2%80%9C-exclusion-empowerment-role-information-and-communication.

[68] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=254.

adopted for its Centres of Excellence programme, which will focus on priority areas agreed at the ITU World Telecommunication Development Conference.[69]

(e) Building confidence and security in the use of ICTs (C5)

56. Cybersecurity continues to be a high priority for the international community. The Global Cybersecurity Agenda provides a framework for coordinating legal, technical, organizational and training needs worldwide.[70] More than 140 Governments participate, alongside business stakeholders, in the initiative of ITU and the International Multilateral Partnership Against Cyberthreats,[71] whose Global Response Centre provides early warnings of cyberthreats and supports incident management. National computer security incident response teams have been established in an increasing number of countries with technical support from ITU and the Forum of Incident Response and Security Teams.[72] ITU and Allied Business Intelligence Research publish an annual global cybersecurity index, comparing the preparedness level of countries.[73]

57. The Council of Europe established a Cybercrime Programme Office to promote capacity-building related to the Convention on Cybercrime, which has 64 signatory countries.[74] The Convention on Cyber Security agreed by the African Union in June 2014 covers e-transactions, data protection, cybersecurity and cybercrime.[75]

58. The impact of the Internet on children concerns many stakeholders. The Child Online Protection initiative of the ITU builds awareness of the risks to children and shares knowledge of relevant tools among practitioners.[76] ITU and the United Nations Children's Fund issued new Guidelines for Industry on Child Online Protection in 2014, and the United Nations Children's Fund published a study entitled *Children, ICT and Development* in 2013, which addressed the range of opportunities for and challenges and threats posed to children in the changing digital environment.[77]

(f) The enabling environment (C6)

59. Enabling policy and regulatory environments are critical to maximizing the impact and development of ICT and must evolve in response to changes in technology and markets. The facilitation meeting of action line C6 focused on "adapting ICT policies and regulatory environment to encourage innovation and enable digital inclusion of all".[78]

60. The annual ITU Global Symposium for Regulators was held in Bahrain in June 2014, with the theme of capitalizing on the potential of the digital world.[79] The 2014 edition of the ITU *Trends in Telecommunication Reform: Fourth Generation Regulation* explored regulatory requirements for the future, including rapid growth in network capacity and usage.[80] ITU offers online guidance to policymakers and regulators through its ICT

[69] http://www.itu.int/itu-wsis/docs/2014_ITU_Contribution_to-WSIS-Implementation.pdf, pp.34–38.
[70] http://www.itu.int/en/action/cybersecurity/Pages/gca.aspx.
[71] http://www.impact-alliance.org/aboutus/ITU-IMPACT.html.
[72] http://www.first.org/.
[73] http://www.itu.int/en/ITU-D/Cybersecurity/Pages/GCI.aspx.
[74] http://www.coe.int/t/DGHL/cooperation/economiccrime/cybercrime/default_en.asp.
[75] http://pages.au.int/sites/default/files/en_AU%20Convention%20on%20CyberSecurity%20Pers%20Data%20Protec%20AUCyC%20adopted%20Malabo.pdf.
[76] http://www.itu.int/en/cop/Pages/default.aspx.
[77] http://www.unicef-irc.org/publications/pdf/unicef_royalholloway_ict4dreport_final.pdf.
[78] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=259.
[79] http://www.itu.int/en/ITU-D/Conferences/GSR/Pages/gsr2014/default.aspx.
[80] http://www.itu.int/en/ITU-D/Regulatory-Market/Pages/Trends/Trends-Special%20Edition.aspx.

Regulation Toolkit, regional economic and financial forums, workshops and capacity-building activities.[81]

61. Increased attention has been paid to legal and regulatory frameworks required to maximize the benefits of e-government, e-commerce and technical innovations such as cloud computing, including legislation for e-transactions, data protection and consumer rights. International standards for the Internet, telecommunications and electronic documentation continue to be developed by multilateral agencies (including ECE and ITU), Internet standards bodies (including the Institute of Electrical and Electronics Engineers, Internet Engineering Task Force and World Wide Web Consortium) and private sector associations.

(g) ICT applications (C7)

E-government

62. The Department of Economic and Social Affairs leads United Nations work on e-government. The Department's *E-Government Survey 2014: E-Government for the Future We Want* highlighted increasing use of ICT in administration and service delivery and explored citizen empowerment through electronic participation.[82] The Department emphasized the value of collaborative governance, to promote sustainable development and multi-channel approaches to citizen engagement, and recognized the challenge of e-government divides arising from differences in network capability and administrative resources, revealed through data compiled for its global e-government development index. All 193 responding countries to the survey now have a government website.

63. The third Global e-Government Forum was held in Kazakhstan in October 2014, with 1,500 participants, focusing on smart governance for sustainable development.[83] The measurement and evaluation tool for e-government readiness[84] and *Compendium of Innovative E-government Practices*[85] of the United Nations Department of Economic and Social Affairs continue to provide information resources to Governments. The Department undertook more than 15 missions in 2014 to assist Governments in implementing e-government strategies, and also produced guidelines and an online course concerned with citizen engagement. The United Nations Public Administration Network Online Training Centre delivered interactive courses to more than 5,000 participants.

64. The Global Centre for ICT in Parliament continues to build a global community of parliaments with expertise in ICT. The biennial World e-Parliament Conference, held in the Republic of Korea in May 2014, focused on the theme lessons learned and future horizons.

E-business

65. The facilitation meeting of action line C7 focused on priorities for e-business in the post-2015 development agenda.[86] Other activities in this area have aimed at increasing e-business awareness and understanding, capacity-building and expanding the use of ICT-enabled tools for market analysis.

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[81] http://www.itu.int/itu-wsis/docs/2014_ITU_Contribution_to-WSIS-Implementation.pdf.

[82] http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf.

[83] http://www.unpan.org/GeGF/2014.

[84] http://www.unpan.org/DPADM/EGovernment/METERforEGovernment/tabid/1270/language/en-US/Default.aspx.

[85] http://unpan1.un.org/intradoc/groups/public/documents/un/unpan048064.pdf.

[86] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?sc=257.

66. UNCTAD published a report on *Empowering Women Entrepreneurs through ICTs*, including a practical framework applied in four African countries.[87] Other priority areas for UNCTAD included work related to women's entrepreneurship and ICT, the development of mobile money and financial services, development and harmonization of legislation concerning e-commerce and improvement of ICT statistics. UNCTAD worked with the Partnership on Measuring ICT for Development to improve information economy statistics and to develop indicators.

67. The UNCTAD *Information Economy Report 2015* discusses unlocking the potential of e-commerce for developing countries and includes a new global database that maps laws concerned with e-transactions, cybercrime, data protection and consumer rights.

68. The International Trade Centre works with the World Bank to deliver capacity-building to small and medium-sized enterprises. Capacity-building for such enterprises is also a priority for the World Trade Organization. The General Council of the World Trade Organization is evaluating progress and considering revisions to its work programme on electronic commerce.

E-learning

69. Education is crucial to the development of information and knowledge societies. ICT is increasingly deployed in primary and secondary schools in developing countries. Particular attention was paid in 2014 by UNESCO and other stakeholders in this action line to the use of low-cost access devices and mobile telephones as learning platforms, growth of open educational resources and emergence of massive online open courses, which enable educators and students to benefit from materials produced for a wide range of audiences.

70. UNESCO led the work of the Broadband Commission's Working Group on Education. The Organization continued to promote ICT professional skills through its Competency Framework for Teachers, to encourage the inclusion of ICT in national and global programmes to meet its goals on education for all and to commend the use of ICT in educational management information systems.[88]

71. ITU is working with bilateral donors to implement projects for school connectivity, including community use of ICTs, through its Connect a School, Connect a Community initiative.[89]

E-health

72. The sixty-sixth World Health Assembly, held in 2013, encouraged Governments to develop long-term strategies for e-health.[90] The number of countries with national e-health strategies rose from 55 to 85 during the period 2009–2013, and there is increased demand for ICT-enabled tools concerned with aspects of health care, including health promotion, epidemiology, clinical interventions and the monitoring of outcomes.[91]

73. The Global Observatory for eHealth of the World Health Organization reports that progress on WSIS outcomes is encouraging, but that there are still major disparities between countries in the extent to which e-health initiatives have been deployed. In conjunction with ITU, the Observatory concluded its third global e-health survey in 2013,

[87] http://unctad.org/en/PublicationsLibrary/dtlstict2013d2_en.pdf.

[88] http://www.unesco.org/new/en/unesco/themes/icts/teacher-education/unesco-ict-competency-framework-for-teachers/.

[89] http://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/CSCC.aspx.

[90] http://www.who.int/mediacentre/events/2013/wha66/en/.

[91] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/wsisreview2014/WSIS2014_review.pdf.

with a particular focus on women's and children's health.[92] The resulting national e-health profiles for 62 countries have been published online.[93]

74. The crucial importance of ICT for emergency response has been highlighted by recent natural disasters and conflicts. ICT, including social networking and crowdsourcing applications, is increasingly used for reporting and mapping emergency needs, information sharing, communications with affected communities and the coordination of emergency relief. ESCAP has paid particular attention to ICT and disaster risk reduction.[94] The United Nations Development Programme and World Bank contributed to and published overviews and studies on the role of ICT in conflict prevention and post-conflict reconstruction in 2013.[95]

E-employment

75. The ICT sector generates employment in a number of economic sectors, including business process outsourcing, and fosters small ICT-enabled enterprises in both developed and developing countries. However, there is also concern that automation and digitalization lead to job reductions in some occupations and concern regarding the need for employees to develop new skills for ICT-enabled work.

76. The World Economic Forum and INSEAD reported on growth and jobs in a hyperconnected world in *The Global Information Technology Report 2013*.[96]

E-environment

77. Increased attention has been paid to the environmental impact of ICT since the United Nations Conference on Sustainable Development in 2012, to which the United Nations Group on the Information Society made a submission.[97] The facilitation meeting of this action line focused on ways of increasing engagement between ICT and other sectors on environmental issues.

78. UNEP estimates that the volume of e-waste could increase fivefold in some developing countries within a decade.[98] The Partnership for Action on Computer Equipment focuses on efforts to reduce the environmental impact of e-waste. The Global E-sustainability Initiative estimates that greenhouse gas emissions from the sector are rising at 3.8 per cent per year, particularly due to the growing use of data centres, but notes that greater savings may be made in emissions from other sectors through the adoption of smart systems in power, transport and manufacturing.[99] The Global E-sustainability Initiative and ITU are exploring ways of reducing the environmental impact of networks and devices.

79. The World Meteorological Organization Information System[100] shares weather information between countries and users and the Integrated Global Observing Strategy

[92] http://www.who.int/goe/survey/2013survey/en/.
[93] http://www.who.int/goe/publications/atlas/2013/en/.
[94] http://www.unescap.org/our-work/ict-disaster-risk-reduction.
[95] http://acuns.org/wp-content/uploads/2013/05/New-Technology-and-the-Prevention-of-Violence-and-Conflict.pdf and http://elibrary.worldbank.org/doi/abs/10.1596/978-1-4648-0074-0.
[96] http://www3.weforum.org/docs/WEF_GITR_Report_2013.pdf.
[97] http://www.ungis.org/Portals/0/documents/thematicmeetings/rio+20/UNGIS-Rio+20-Contribution.pdf.
[98] http://www.unep.org/ietc/Portals/136/Other%20documents/PolicyBriefs/13052013_E-Waste%20Policy%20brief.pdf.
[99] http://gesi.org/assets/js/lib/tinymce/jscripts/tiny_mce/plugins/ajaxfilemanager/uploaded/SMARTer%202020%20-%20The%20Role%20of%20ICT%20in%20Driving%20a%20Sustainable%20Future%20-%20December%202012.pdf.
[100] http://www.wmo.int/pages/prog/www/WIS/.

seeks to improve the quantity and quality of available meteorological and climate data.[101] The Protocol on Pollutant Release and Transfer Registers of ECE offers a model for ICT-enabled monitoring of pollution.[102] The European Environment Agency has pioneered digital mapping and information sharing on environmental issues.[103]

E-agriculture

80. WSIS follow-up activity on this action line is underpinned by the E-agriculture community of practice, for which FAO acts as secretariat.[104] E-agriculture facilitates collaboration in knowledge-sharing, networking, research and programme implementation. As of December 2014, the community had over 12,000 participants from more than 170 countries, including development practitioners, policymakers, representatives of farmers' organizations, researchers and ICT specialists in agriculture and rural development.

81. Key topics addressed by the community in 2014 included the role of ICT in agriculture value chains, use of mobile and smart telephones, including mobile financial services, development of national e-agriculture strategies and public–private partnerships. The facilitation meeting of this action line considered how to build on lessons learned in the decade since WSIS. FAO has emphasized the need to integrate issues of affordability, content, gender and skills development in e-agriculture strategies.

E-science

82. Increased attention has been paid by UNESCO and other agencies to the interface between public policy, ICT and science, technology and innovation. This action line focuses on such themes as the use of ICT-enabled sensors and other technical innovations in data-gathering, citizen science, big-data analysis, public access to scientific information and the diffusion of scientific knowledge.

83. Access to scientific papers is promoted through the Research4Life programme[105] and UNESCO has extended its Science Policy Information Network to a Global Observatory of Science, Technology and Innovation Policy Instruments, which provides information to policymakers.[106]

(h) Cultural diversity and identity, linguistic diversity and local content (C8)

84. The *Final WSIS Targets Review* shows that, while there is continuing diversification in Internet content and language, much still needs to be done to improve equitable access to content, especially in minority languages. At the end of 2013, there were an estimated 185 million active websites and 245 million Internet domains. Internet content has become linguistically more varied and automated translation is becoming more effective. The proportion of websites registered in developed countries has remained relatively constant, at about 80 per cent.

85. UNESCO facilitates action line C8 and has undertaken extensive work in its programmes on related issues, including targeted capacity-building and knowledge sharing, protection and promotion of digital heritage, support for creative industries and multilingualism.

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[101] http://www.eohandbook.com/igosp/.
[102] http://www.unece.org/env/pp/prtr.html.
[103] http://www.eea.europa.eu/data-and-maps.
[104] http://www.e-agriculture.org/.
[105] http://www.research4life.org/.
[106] http://www.unesco.org/new/en/natural-sciences/science-technology/sti-policy/global-observatory-of-policy-instruments/.

86. Internet stakeholders, including ICANN, ITU and UNESCO, have made progress towards a multilingual Internet following the introduction of internationalized top-level domains in 2009. By late 2014, 78 internationalized top-level domains had been delegated, including 38 country code domains and 40 new global domains. Approximately 4 million internationalized domain names of various kinds had been registered by 2014. In association with the .eu registry EURid, UNESCO prepared the *World Report on Internationalized Domain Names 2014*.[107]

(i) Media (C9)

87. Increased attention has been paid to the changing relationship between traditional media and ICT, including the development of social media and citizen journalism. The facilitation meeting of action line C9 focused on the role of media in the post-2015 development agenda.[108] WIPO organized a session on new media distribution channels at the WSIS+10 High-Level Event.[109]

88. The *World Trends in Freedom of Expression and Media Development* published by UNESCO summarizes developments concerning media freedom, pluralism, independence and the safety of journalists.[110] UNESCO also published an assessment of the role of information intermediaries, prepared national assessments using media development indicators and led the development of the Global Alliance for Partnerships on Media and Information Literacy.[111] The Organization launched a Global Initiative for Excellence in Journalism Education[112] and its International Programme for the Development of Communications supported 143 media development projects benefiting 77 developing countries during the period 2013–2014.[113]

89. ITU continues to support the transition from analog to digital broadcasting.

(j) Ethical dimensions of the information society (C10)

90. The General Assembly affirmed that the same rights that people have offline must also be protected online, including freedom of expression and privacy. The Office of the United Nations High Commissioner for Human Rights, in a report on the right to privacy in the digital age presented to the General Assembly in 2014, noted that ICT can improve the enjoyment of human rights and enhance the capacity of Governments, enterprises and individuals to conduct surveillance, interception and data collection (A/HRC/27/37).[114] The General Assembly adopted resolution 69/166 on 18 December 2014, which called on Governments to review procedures regarding surveillance, interception and personal data, with a view to upholding the right of privacy.[115]

91. The UNESCO General Conference in 2013 mandated a comprehensive study of Internet-related issues, to be undertaken through a multi-stakeholder consultation

[107] http://www.eurid.eu/files/publ/IDNWorldReport2014_Interactive.pdf.
[108] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=225.
[109] http://www.itu.int/wsis/implementation/2014/forum/agenda/#?se=178.
[110] http://unesdoc.unesco.org/images/0022/002270/227025e.pdf.
[111] http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/global-alliance-for-partnerships-on-media-and-information-literacy/.
[112] http://www.unesco.org/new/en/communication-and-information/resources/news-and-in-focus-articles/in-focus-articles/2013/unesco-launches-new-syllabi-unveils-global-initiative-for-excellence-in-journalism-education/.
[113] http://www.unesco.org/new/en/communication-and-information/intergovernmental-programmes/ipdc/.
[114] http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session27/Pages/ListReports.aspx.
[115] http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/69/166.

process.[116] A questionnaire concerning four key issues – access, freedom of expression, privacy and ethics – was distributed during 2014. Following discussion of the initial findings at the Connecting the Dots conference, to be held in France in March 2015,[117] the final study will be reported to the UNESCO General Conference in November 2015.

92. UNESCO has begun to develop training and other resources on information ethics for policymakers. The Council of Europe is preparing a comparative legal study of Internet blocking, filtering and takedown of content, for publication in 2015.

(k) International and regional cooperation (C11)

93. This action line is administered by the United Nations Department of Economic and Social Affairs, ITU, UNCTAD, UNESCO, United Nations regional commissions, WIPO and other United Nations entities foster international and regional cooperation and work with other intergovernmental agencies through events, conferences, meetings and joint programmes.

94. The ITU World Telecommunication Development Conference, held in the United Arab Emirates in 2014, established an action plan for the work of the ITU Telecommunication Development Sector to 2018, focused on international cooperation, an enabling environment for ICT development, security, capacity-building and ICT in relation to the environment.[118] The ITU also held its quadrennial Plenipotentiary Conference, in the Republic of Korea in October–November 2013.[119]

2. Implementation of themes

(a) Financing mechanisms

95. Private sector investment in ICT remains positive, focusing on mobile networks and international and national broadband infrastructure. Investment recovered from the recent economic downturn more quickly in developing than developed countries, and there has been continued growth in South-South investment and investment by online service providers and cloud-computing businesses.[120]

96. International financial institutions, including the World Bank, provide finance for investment in areas that are less attractive to private investors, as well as guidance on policy and regulatory approaches that will attract investment. Public–private partnerships have been a recurrent theme in their work. Multilateral and bilateral providers of official development assistance are more focused on the development impacts of ICT.

(b) Internet governance

Enhanced cooperation

97. The Tunis Agenda calls for enhanced cooperation "to enable Governments, on an equal footing, to carry out their roles and responsibilities in international public policy

[116] http://www.unesco.org/new/en/communication-and-information/crosscutting-priorities/unesco-internet-study/unesco-comprehensive-study-on-internet-related-issues/.
[117] http://en.unesco.org/events/connecting-dots-options-future-action.
[118] http://www.itu.int/en/newsroom/wtdc-14/Pages/highlights10.aspx.
[119] http://www.itu.int/en/plenipotentiary/2014/Pages/default.aspx.
[120] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf.

issues pertaining to the Internet, but not in the day-to-day technical and operational matters that do not impact on international public policy issues".[121]

98 The General Assembly adopted resolution 67/195 on 21 December 2012, which invited the Chair of the CSTD to establish a Working Group on Enhanced Cooperation, to examine the mandate of the WSIS, through seeking, compiling and reviewing inputs from all Member States and all other stakeholders, and to make recommendations on how to implement this mandate.[122] The Group held four meetings between May 2013 and May 2014, and its Chair reported to the CSTD in May 2014 that, while consensus had emerged on some issues, there was a significant divergence of views concerning others, which had prevented the Group from finalizing recommendations. The Economic and Social Council resolution 2014/27 recommended that the review of international public policy issues pertaining to the Internet initiated by the Group be continued by the CSTD secretariat.[123] Progress by the secretariat was discussed at the intersessional panel in November 2014.

Internet Governance Forum

99. The IGF enables all stakeholders to exchange knowledge and ideas about the development of the Internet. Its ninth annual meeting was held in Turkey from 2 to 5 September 2014, with the theme of connecting continents for enhanced multi-stakeholder Internet governance. Approximately 2,400 people attended, with a further 1,000 online participants using a network of 52 remote hubs.[124]

100. Discussions in the main sessions focused on a number of themes, including policies enabling access, growth and development, network neutrality, the role of ICANN and the stewardship transition of the Internet Assigned Numbers Authority functions and the evolution of the Internet governance ecosystem, including the role of IGF. More than 150 other meetings fed into the main sessions and facilitated networking and information exchanges.[125] A series of best practice forums was introduced, concerned with multi-stakeholder engagement, spam, computer security incident response teams, local content and online child protection. The United Nations Department of Economic and Social Affairs noted that many participants stressed the need for increased interaction between government entities and other stakeholders in deliberations concerning trust in cyberspace.

101. The Multi-stakeholder Advisory Group of the IGF continued to implement the recommendations of the CSTD Working Group on Improvements to the IGF in 2014.[126] The number of national and regional Internet governance forums has continued to grow, with more than 30 such initiatives reported during 2014. More intersessional activity will take place between the 2014 and 2015 sessions. The tenth meeting of the IGF, the final meeting in its current mandate, will take place in Brazil in November 2015.[127] The General Assembly will consider the renewal of the mandate of the IGF in 2015 as part of its overall review of WSIS implementation.

[121] http://www.itu.int/wsis/docs2/tunis/off/6rev1.html.
[122] http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/67/195.
[123] http://unctad.org/en/Pages/CSTD/WGEC.aspx.
[124] http://www.intgovforum.org/cms/component/content/article?id=1557:2014.
[125] http://www.intgovforum.org/cms/igf-2014/schedule-igf2014.
[126] http://www.unctad.info/en/CstdWG/.
[127] http://www.intgovforum.org/cms/preparatory-process-2015.

Measuring ICT for development

102. The Partnership on Measuring ICT for Development is a collaborative forum of the United Nations and other agencies, concerned with data collection and analysis of the outcomes of WSIS and ICT for development.[128]

103. The Partnership launched its *Final WSIS Targets Review* at the WSIS+10 High-Level Event.[129] This comprehensive assessment of progress made towards achieving the 10 WSIS targets set in 2003 drew on available data, including the results of a questionnaire issued to Member States in 2013. The review included recommendations concerning future targets and indicators and its core findings are summarized in chapter I of this report.

104. The Partnership identified 58 core ICT indicators for measurement by national statistics offices, covering the following areas: ICT infrastructure and access; access and use of ICT by households and individuals; use of ICT by businesses; the ICT sector; trade in ICT goods; ICT in education; and e-government.[130] In 2014, the Partnership published a *Manual for Measuring e-Government* with the Economic Commission for Africa[131] and *Measuring ICT and Gender: An Assessment* with UNCTAD.[132] An International Conference on Big Data for Official Statistics was organized in China in October 2014 by the United Nations Statistics Division.[133]

105. ITU maintains the World Telecommunication/ICT Indicators Database (available through the ICT-Eye portal), which includes more than 100 indicators from over 200 countries.[134] In November 2014, ITU published its annual *Measuring the Information Society Report*, including the latest data on ICT connectivity and access, the ICT Price Basket – a measure of the affordability of telephone and broadband services – and the ICT development index, which draws together data concerning ICT access, usage and skills to assess the capacity of countries to use ICT to enhance growth and development.[135]

106. At its Plenipotentiary Conference, ITU adopted the Connect 2020 Agenda, which sets out 17 targets for developments in ICT growth, inclusion, sustainability and innovation for achievement by the end of the decade.[136]

V. Findings and suggestions

107. The contribution of the information society to human development since WSIS has been considerable and continues to grow rapidly. Access to ICT continues to become more widespread and ICT applications are more extensively used by people in all countries. ICT

[128] The 14 member organizations are ECLAC, ESCAP, ESCWA, Eurostat, International Labour Organization, ITU, OECD, UNCTAD, UNESCO Institute for Statistics, United Nations Department of Economic and Social Affairs, United Nations Economic Commission for Africa, UNEP secretariat of the Basel Convention, United Nations University and World Bank. See http://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/default.aspx.**Error! Hyperlink reference not valid.**

[129] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/wsisreview2014/WSIS2014_review.pdf.

[130] http://www.itu.int/en/ITU-D/Statistics/Pages/coreindicators/default.aspx.

[131] http://www.itu.int/en/ITU-D/Statistics/Documents/partnership/eGovernment_Manual_Final_2014.pdf.

[132] http://unctad.org/en/PublicationsLibrary/webdtlstict2014d1_en.pdf.

[133] http://unstats.un.org/unsd/trade/events/2014/Beijing/.

[134] http://www.itu.int/ITU-D/ICTEYE/.

[135] http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf.

[136] http://www.itu.int/en/connect2020/Pages/default.aspx.

innovations have had profound impacts on the ways in which Governments deliver services, businesses relate to consumers and citizens participate in public and private life.

108. In spite of these successes, digital divides remain a serious challenge to efforts to implement WSIS outcomes. While divides in access to basic communications between and in countries have been diminishing, new divides have been growing in access to broadband networks and the services that they enable. Particular concern has been expressed that least developed countries may fall behind developed and other developing countries in broadband access and use, that rural areas are often disadvantaged in comparison with urban areas and that there remains a gender gap in ICT access and use. The *WSIS+10 Vision for WSIS Beyond 2015* recommends that particular attention be paid to gender issues in future in all action lines. Addressing these divides will continue to be central to the implementation of WSIS outcomes.

109. A number of widely-shared priorities emerged from contributions by Governments and other stakeholders to consultations undertaken in 2014 for the WSIS+10 High-Level Event and the CSTD review of WSIS outcomes, including the following: importance of investment in broadband networks and services, content and capacity-building for users to be able to make full use of the opportunities provided by ICT; need to ensure trust in ICT and maintain cybersecurity; need for legal and regulatory arrangements to adapt to rapidly changing technology and markets, including the growing significance of e-commerce, cloud computing and the Internet of things; need to resolve differences concerning Internet governance, enabling Governments and other stakeholders to carry out their roles and responsibilities in accordance with WSIS outcomes; and importance of ensuring that ICT contributes positively towards meeting environmental challenges.

110. Monitoring of these developments will be crucial in the next phase of information society. The targets agreed in 2003 provided a useful basis for assessing progress following WSIS, but their value is now limited by the changes that have taken place in technology and services. The Partnership on Measuring ICT for Development recommends that future targets and indicators be ambitious, realistic and achievable, readily measurable and related to the post-2015 development agenda, with more attention paid to the development impact of ICT. To achieve this, Governments and international agencies will need to improve the capacity of national statistics offices and other stakeholders monitoring and measuring the information society.

111. The task of implementing WSIS outcomes is the responsibility of a variety of actors. Governments are responsible for establishing enabling and flexible policy and regulatory environments and for encouraging investment in the ICT sector. The private sector plays the leading role in technology innovation, infrastructure deployment and service provision. Development agencies support investment and provide policy advice to Governments. Civil society makes a substantial contribution to analysing social and economic developments, focusing attention on the needs of ICT users and ensuring the inclusiveness of the evolving information society. General Assembly resolution 69/204 encourages strengthened and continued cooperation between and among stakeholders, including public–private partnerships and the promotion of national and regional multi-stakeholder thematic platforms.

112. The overall review of the implementation of WSIS outcomes to be undertaken by the General Assembly in 2015 will be informed by such contributions as the outcomes of the WSIS+10 High-Level Event, the first WSIS+10 review event, held in 2013 – Towards Knowledge Societies for Peace and Sustainable Development – and the 10-year review by the CSTD of the progress made in the implementation of the outcomes of the WSIS. The review presents an outstanding opportunity for the international community to assess achievements and challenges since 2005, look forward to the continuing development of information and knowledge societies beyond 2015, and support their integration into the

post-2015 development agenda and thereby maintain and develop the WSIS vision of a people-centred, inclusive and development-oriented information society.